FILE 'HOME' ENTERED AT 18:29:49 ON 28 NOV 2006

=> file reg
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 18:29:58 ON 28 NOV 2006
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DICTIONARY FILE UPDATES: 27 NOV 2006 HIGHEST RN 914071-04-8

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=>
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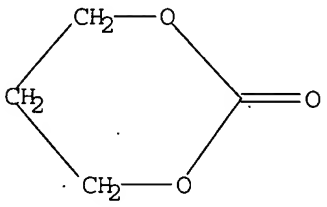
L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 full
FULL SEARCH INITIATED 18:30:28 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 11735 TO ITERATE

100.0% PROCESSED 11735 ITERATIONS 352 ANSWERS
SEARCH TIME: 00.00.01

L2 352 SEA SSS FUL L1

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=> file caplus
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                       166.94     167.15

FILE 'CAPLUS' ENTERED AT 18:30:37 ON 28 NOV 2006
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FILE COVERS 1907 - 28 Nov 2006  VOL 145 ISS 23
FILE LAST UPDATED: 27 Nov 2006  (20061127/ED)

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=> s l2 and battery and electrolyte
           941 L2
        129056 BATTERY
        252397 ELECTROLYTE
L3          15 L2 AND BATTERY AND ELECTROLYTE

=> d l3 1-15 ibib kwic

L3   ANSWER 1 OF 15  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2006:365016  CAPLUS
DOCUMENT NUMBER:          144:424179
TITLE:                    Ion conductor
INVENTOR(S):              Koh, Meiten; Yamauchi, Akiyoshi
PATENT ASSIGNEE(S):       Daikin Industries, Ltd., Japan
SOURCE:                   PCT Int. Appl., 45 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.          DATE
     --------------      ----   --------    --------------------     --------
     WO 2006041008        A1    20060420    WO 2005-JP18542          20051006
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
             NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
             SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
             ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
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GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

JP 2006114401 A2 20060427 JP 2004-301934 20041015

PRIORITY APPLN. INFO.: JP 2004-301934 A 20041015

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB Disclosed is a polymer ion conductor having high ionic conductivity even around room temperature, low viscosity, incombustibility and excellent oxidation resistance. This polymer ion conductor satisfies the characteristics required for solid electrolytes of Li secondary batteries, solid electrolytes of capacitors and solid electrolytes of solar cells. Specifically disclosed is a polymer ion conductor containing an ion-conductive compound (I) and an electrolyte salt (II), wherein the ion-conductive compound (I) is composed of an amorphous F-containing polyether compound having a F-containing group in a side chain while containing an electrolyte-soluble unit, or a crosslinked product thereof.

ST ion conductor polymer solid electrolyte battery capacitor; solar cell

IT 359-41-1, Trifluoromethyloxirane 2453-03-4, 1,3-Dioxan-2-one 7791-03-9, Lithium perchlorate (LiClO4) 647833-26-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(polymer ion conductors for solid electrolytes of secondary batteries, capacitors and solar cells)

L3 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:13801 CAPLUS

DOCUMENT NUMBER: 144:111262

TITLE: Electrolyte for lithium secondary battery

INVENTOR(S): Jung, Cheol-Soo; Choi, Bo-Geum; Song, Eui-Hwan

PATENT ASSIGNEE(S): S. Korea

SOURCE: U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006003232	A1	20060105	US 2005-174075	20050630
KR 2006001742	A	20060106	KR 2004-50905	20040630
KR 2006001743	A	20060106	KR 2004-50906	20040630
KR 2006001744	A	20060106	KR 2004-50907	20040630
JP 2006019274	A2	20060119	JP 2005-183932	20050623
CN 1716681	A	20060104	CN 2005-10079858	20050629

PRIORITY APPLN. INFO.: KR 2004-50905 A 20040630
KR 2004-50906 A 20040630
KR 2004-50907 A 20040630

OTHER SOURCE(S): MARPAT 144:111262

TI Electrolyte for lithium secondary battery

AB An electrolyte for a lithium secondary battery is provided. The electrolyte improves battery safety, high temperature storage characteristics, and electrochem. properties of lithium batteries. The electrolyte comprises at least one lithium salt and a non-aqueous organic solvent comprising a cyclic carbonate and a lactone-based compound The lactone based compound comprises substituents selected from the group consisting of alkyl groups, alkenyl groups, alkynyl groups, aryl groups, and combinations thereof. A lithium battery is also provided, which comprises a neg. electrode capable of intercalating/deintercalating lithium, a pos. electrode capable of intercalating/deintercalating lithium, and an inventive

electrolyte.

ST electrolyte lithium secondary battery; safety electrolyte lithium secondary battery

IT Alkenes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(C2-8, copolymers with propylene; electrolyte for lithium secondary battery)

IT Synthetic rubber, uses
RL: MOA (Modifier or additive use); USES (Uses)
(acrylic-butadiene; electrolyte for lithium secondary battery)

IT Styrene-butadiene rubber, uses
RL: MOA (Modifier or additive use); USES (Uses)
(carboxy-containing; electrolyte for lithium secondary battery)

IT Battery electrolytes
(electrolyte for lithium secondary battery)

IT Carbonaceous materials (technological products)
Fullerenes
Lactones
RL: DEV (Device component use); USES (Uses)
(electrolyte for lithium secondary battery)

IT Carbon black, uses
RL: MOA (Modifier or additive use); USES (Uses)
(electrolyte for lithium secondary battery)

IT Fluoropolymers, uses
RL: MOA (Modifier or additive use); USES (Uses)
(electrolyte for lithium secondary battery)

IT Nitrile rubber, uses
RL: MOA (Modifier or additive use); USES (Uses)
(electrolyte for lithium secondary battery)

IT Polyoxyalkylenes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(electrolyte for lithium secondary battery)

IT Styrene-butadiene rubber, uses
RL: MOA (Modifier or additive use); USES (Uses)
(electrolyte for lithium secondary battery)

IT Ethers, uses
RL: MOA (Modifier or additive use); USES (Uses)
(fluoroalkyl; electrolyte for lithium secondary battery)

IT Carbon fibers, uses
RL: DEV (Device component use); USES (Uses)
(graphite; electrolyte for lithium secondary battery)

IT Secondary batteries
(lithium; electrolyte for lithium secondary battery)

IT 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate 463-79-6D, Carbonic acid, cyclic esters 872-36-6, Vinylene carbonate 4437-85-8, Butylenecarbonate 7439-93-2D, Lithium, intercalation compds. 7439-93-2D, Lithium, salts 7447-41-8, Lithium chloride, uses 7782-42-5, Graphite, uses 7791-03-9, Lithium perchlorate 10377-51-2, Lithium iodide 14024-11-4, Lithium tetrachloroaluminate 14283-07-9, Lithium tetrafluoroborate 18424-17-4, Lithium hexafluoroantimonate 21324-40-3, Lithium hexafluorophosphate 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithiumtriflate 37220-89-6, Aluminum lithium oxide 90076-65-6 99685-96-8, Fullerene 131651-65-5, Lithium nonafluorobutanesulfonate
RL: DEV (Device component use); USES (Uses)
(electrolyte for lithium secondary battery)

IT 57-57-8, β-Propiolactone 68-12-2, DMF, uses 75-05-8, Acetonitrile, uses 79-41-4D, Methacrylic acid, copolymer with alkyl

methacrylate 96-47-9, 2-Methyltetrahydrofuran 96-48-0, γ-Butyrolactone 104-50-7, γ-Octanolactone 104-61-0, γ-Nonalactone 105-21-5, γ-Heptanolactone 105-58-8, Diethyl carbonate 108-29-2, γ-Valerolactone 109-99-9, THF, uses 110-71-4, 1,2-Dimethoxyethane 115-07-1D, Propylene, copolymers with C2-8 olefins 123-91-1, 1,4-Dioxane, uses 502-44-3, ε-Caprolactone 542-28-9, δ-Valerolactone 554-12-1, Methyl propionate 616-38-6, Dimethyl carbonate 623-53-0, Ethylmethyl carbonate 623-96-1, Dipropyl carbonate 629-14-1, 1,2-Diethoxyethane 695-06-7, γ-Caprolactone 698-76-0, δ-Octanolactone 705-86-2, δ-Decanolactone 706-14-9, γ-Decanolactone 713-95-1, δ-Dodecanolactone 823-22-3, δ-Caprolactone 1000-28-8 3068-88-0, β-Butyrolactone 3301-90-4, δ-Heptanolactone 3301-94-8, δ-Nonalactone 3967-54-2, Chloroethylene carbonate 3967-55-3 9000-11-7D, CMC, alkali metal salts 9002-89-5, Polyvinyl alcohol 9002-98-6 9003-01-4, Polyacrylic acid 9003-04-7, Sodium polyacrylate 9003-05-8, Polyacrylamide 9003-39-8, Polyvinylpyrrolidone 9004-34-6D, Cellulose, compds. 9004-65-3D, Hydroxypropylmethyl cellulose, alkali metal salts 9004-67-5D, Methyl cellulose, alkali metal salts 9005-82-7, Amylose 11104-61-3, Cobalt oxide 13463-67-7, Titanium oxide, uses 16627-68-2 16627-71-7 24937-79-9, PVDF 25087-26-7, Polymethacrylic acid 25189-55-3, Poly-N-isopropylacrylamide 25322-68-3, PEO 26101-52-0, Polyvinylsulfonic acid 26570-48-9, Polyethylene glycol diacrylate 26590-05-6, Acrylamide-diallyldimethyl ammonium chloride copolymer 26793-34-0, Poly-N,N-dimethylacrylamide 29695-83-8 29756-70-5 30413-33-3, DiBromoethylene carbonate 31851-82-8 35363-40-7, Ethylpropyl carbonate 56525-42-9, Methylpropyl carbonate 65064-78-0 65064-81-5 85771-75-1 114435-02-8, Fluoroethylene carbonate 114705-56-5 171730-81-7 215650-15-0 827300-14-1 827300-17-4 872584-19-5 872584-20-8 872584-21-9 872586-49-7 872586-50-0 872586-51-1 872586-52-2 872586-53-3 872586-54-4 872586-56-6 872586-58-8 872586-60-2 872586-62-4 872586-63-5 872586-64-6 872586-65-7
RL: MOA (Modifier or additive use); USES (Uses)
(electrolyte for lithium secondary battery)

IT 7440-44-0, Carbon, uses
RL: DEV (Device component use); USES (Uses)
(graphitized mesocarbon microbeads; electrolyte for lithium secondary battery)

IT 9003-18-3
RL: MOA (Modifier or additive use); USES (Uses)
(nitrile rubber; electrolyte for lithium secondary battery)

IT 7440-02-0, Nickel, uses
RL: MOA (Modifier or additive use); USES (Uses)
(powder; electrolyte for lithium secondary battery)

IT 9003-55-8 9003-55-8D, carboxy-containing
RL: MOA (Modifier or additive use); USES (Uses)
(styrene-butadiene rubber; electrolyte for lithium secondary battery)

L3 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:505682 CAPLUS
DOCUMENT NUMBER: 141:352612
TITLE: Preparation and characterization of a novel polymer electrolyte based on lithium hexafluoroarsenate
AUTHOR(S): Barros, Sandra Cerqueira; Silva, Maria Manuela; Smith, Michael J.; MacCallum, James R.
CORPORATE SOURCE: IBQF, Universidade do Minho, Braga, 4700-320, Port.
SOURCE: Materials Science Forum (2004), 455-456, 596-601
CODEN: MSFOEP; ISSN: 0255-5476

PUBLISHER: Trans Tech Publications Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Preparation and characterization of a novel polymer electrolyte based on lithium hexafluoroarsenate

AB A solid polymer electrolyte based on poly(trimethylene carbonate), p(TMC), and Li hexafluoro arsenate is described. Electrolytes with different salt contents were prepared by solvent casting from THF and were characterized by conductivity measurements and thermal anal. using DSC and TGA. The salt content of these electrolytes was identified by the polymer/salt ratio and the value of n represents the number of ((C=O)OCH2CH2CH2O) units per Li ion. The appearance and morphol. of electrolyte samples with n between 4 and 80 was similar to that observed with electrolytes based on the same host polymer with other Li salts. Over this composition range, thin films of electrolyte were transparent, freestanding and completely amorphous.

ST lithium hexafluoroarsenate trimethylene carbonate polymer electrolyte lithium battery

IT Battery electrolytes
Polymer electrolytes
(poly(trimethylene carbonate)/lithium hexafluoro arsenate polymer electrolyte for)

IT 7439-93-2D, Lithium, poly(trimethylene carbonate) complexes 29935-35-1, Lithium hexafluoro arsenate (LiAsF6) 31852-84-3D, Poly(trimethylene carbonate), lithium complexes
RL: DEV (Device component use); USES (Uses)
(poly(trimethylene carbonate)/lithium hexafluoro arsenate polymer electrolyte for)

L3 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:796193 CAPLUS
DOCUMENT NUMBER: 139:310049
TITLE: Batteries comprising alkali-transition metal phosphates and preferred electrolytes
INVENTOR(S): Pugh, James; Saidi, Mohammed Y.; Huang, Haitao
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 24 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003190527	A1	20031009	US 2002-116276	20020403
CA 2479790	AA	20031016	CA 2003-2479790	20030327
WO 2003085757	A1	20031016	WO 2003-US9634	20030327
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003224801	A1	20031020	AU 2003-224801	20030327
EP 1490917	A1	20041229	EP 2003-721492	20030327
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

JP 2005522009	T2	20050721	JP 2003-582838		20030327
CN 1650450	A	20050803	CN 2003-810033		20030327
US 2005181283	A1	20050818	US 2005-80605		20050315
PRIORITY APPLN. INFO.:			US 2002-116276	A	20020403
			WO 2003-US9634	W	20030327

AB Lithium batteries comprising: (a) an electrode comprising a material AaMb(XY4)cZd , wherein (i) A is an alkali metal and 0<a≤9; (ii) M comprises a transition metal, and 1≤b≤3; (iii) XY4 is X'O4-x Y'x, X'O4-yY'2y, X''S4, or mixts. thereof, where X' is P, As, Sb, Si, Ge, V, S, or mixts. thereof; X'' is P, As, Sb, Si, Ge, V, or mixts. thereof; Y' is halogen, S, N, or mixts. thereof; 0≤x<3; and 0<y≤2; and 0<c≤3; and (iv) Z is OH, halogen, or mixts. thereof, and 0≤d≤6; and (b) a counter-electrode; and (c) an electrolyte comprising an alkyl and/or alkylene carbonate and a cyclic ester. Preferably, M addnl. comprises at least one non-transition metal. Preferred embodiments include those having an olivine structure, where c = 1, and those having a NASICON structure, where c = 3.

ST lithium battery cathode alkali transition metal phosphate

IT Battery cathodes
Battery electrolytes
(batteries comprising alkali-transition metal phosphates and preferred electrolytes)

IT 57-57-8, β-Propiolactone 96-48-0, γ-Butyrolactone 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, 1,2-Propylene carbonate 502-44-3, ε-Caprolactone 542-28-9, δ-Valerolactone 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 2453-03-4, 1,3-Propylene carbonate 4427-90-1, 1,5-Pentylene carbonate 4427-94-5, 1,4-Butylene carbonate 4437-70-1, 2,3-Butylene carbonate 4437-85-8, 1,2-Butylene carbonate 7440-44-0, Carbon, uses 7550-35-8, Lithium bromide (LiBr) 7782-42-5, Graphite, uses 7791-03-9, Lithium perchlorate 14024-11-4, Lithium tetrachloroaluminate 14283-07-9, Lithium tetrafluoroborate 14485-20-2, Lithium tetraphenylborate 15365-14-7, Iron lithium phosphate felipo4 21324-40-3, Lithium hexafluorophosphate 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 90076-65-6
132843-44-8 610271-90-4 610271-94-8 610272-06-5 610310-87-7
610310-88-8 610310-92-4 610310-95-7 610310-97-9 610310-99-1
610311-00-7 610321-55-6 610321-60-3 610754-69-3
RL: DEV (Device component use); USES (Uses)
(batteries comprising alkali-transition metal phosphates and preferred electrolytes)

L3 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:	2003:719766 CAPLUS
DOCUMENT NUMBER:	139:248016
TITLE:	Cathode active material, manufacturing method thereof, and nonaqueous electrolyte secondary battery
INVENTOR(S):	Ohzuku, Tsutomu; Yoshizawa, Hiroshi; Nagayama, Masatoshi; Koshina, Hizuru
PATENT ASSIGNEE(S):	Matsushita Electric Industrial Co., Ltd., Japan; Osaka City
SOURCE:	PCT Int. Appl., 92 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	Japanese
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003075376	A1	20030912	WO 2003-JP1997	20030224

W: CN, KR, US
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR

JP 2003323893	A2	20031114	JP 2002-129134		20020430
EP 1487039	A1	20041215	EP 2003-707026		20030224
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, CY, TR, BG, CZ, EE, HU, SK					
US 2005170250	A1	20050804	US 2003-506298		20030224
CN 1692511	A	20051102	CN 2003-805003		20030224
PRIORITY APPLN. INFO.:			JP 2002-56480	A	20020301
			JP 2002-129134	A	20020430
			WO 2003-JP1997	W	20030224

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Cathode active material, manufacturing method thereof, and nonaqueous electrolyte secondary battery

AB A cathode active material is expressed by $Li_{2\pm\alpha}[Me]_4O_{8-x}$ ($0\leq\alpha<0.4$, $0\leq x<2$, Me = Mn and transition metal selected from Ni, Cr, Fe, Co and/or Cu) and exhibits a two-phase reaction in a charge-discharge region. The cathode active material is obtained by mixing Mn with Ni, Cr, Fe, Co and/or Cu to prepare a raw material or synthesizing a eutectic compound containing a Mn compound and Ni, Cr, Fe, Co and/or Cu, mixing the raw material or eutectic compound with Li compound, and heating at ≥600°. A nonaq. electrolyte secondary battery of 3V class having an excellent voltage flatness and high-rate cycle service life has cathode from the cathode active material, Ti oxide-containing anode, a nonaq. electrolyte, and separator.

ST nonaq electrolyte secondary battery cathode active material

IT Polyolefin fibers
RL: TEM (Technical or engineered material use); USES (Uses)
(ethylene, separator; manufacture of cathode active material and nonaq. electrolyte secondary battery having high-rate cycle service life)

IT Battery cathodes
Secondary batteries
(manufacture of cathode active material and nonaq. electrolyte secondary battery having high-rate cycle service life)

IT Polyester fibers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(poly(tetramethylene terephthalate), separator; manufacture of cathode active material and nonaq. electrolyte secondary battery having high-rate cycle service life)

IT Polypropene fibers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(separator; manufacture of cathode active material and nonaq. electrolyte secondary battery having high-rate cycle service life)

IT 12031-95-7, Lithium titanium oxide ($Li_4Ti_5O_{12}$)
RL: TEM (Technical or engineered material use); USES (Uses)
(anode containing, cathode active material; manufacture of cathode active material and nonaq. electrolyte secondary battery having high-rate cycle service life)

IT 12016-91-0, Cobalt lithium manganese oxide ($CoLi_2Mn_3O_8$) 12019-01-1, Copper lithium manganese oxide ($CuLi_2Mn_3O_8$) 12031-75-3, Lithium manganese nickel oxide ($Li_2Mn_3NiO_8$) 106389-48-4, Iron lithium manganese oxide ($FeLi_2Mn_3O_8$) 171261-66-8, Chromium lithium manganese oxide ($Cr_{0.5}LiMn_{1.5}O_4$)
RL: TEM (Technical or engineered material use); USES (Uses)
(cathode active material; manufacture of cathode active material and nonaq. electrolyte secondary battery having high-rate cycle service life)

IT 96-48-0 108-29-2, γ-Valerolactone 111-96-6, Methyl diglyme

126-33-0, Sulfolane 512-56-1, Trimethyl phosphate 2453-03-4, 1,3-Dioxan-2-one 597526-85-7
RL: TEM (Technical or engineered material use); USES (Uses)
(electrolyte containing; manufacture of cathode active material and nonaq. electrolyte secondary battery having high-rate cycle service life)

IT 14283-07-9 21324-40-3, Lithium hexafluorophosphate (LiPF6)
RL: TEM (Technical or engineered material use); USES (Uses)
(electrolyte; manufacture of cathode active material and nonaq. electrolyte secondary battery having high-rate cycle service life)

L3 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:677104 CAPLUS
DOCUMENT NUMBER: 139:383915
TITLE: Characterization of a novel polymer electrolyte based on a plasticizing lithium salt
AUTHOR(S): MacCallum, James R.; Silva, Maria Manuela; Barros, Sandra Cerqueira; Smith, Michael J.; Fernandes, Elsa
CORPORATE SOURCE: School of Chemistry, University of St. Andrews, St. Andrews, KY16 9ST, UK
SOURCE: Proceedings - Electrochemical Society (2003), 2001-21(Batteries and Supercapacitors), 476-484
CODEN: PESODO; ISSN: 0161-6374
PUBLISHER: Electrochemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Characterization of a novel polymer electrolyte based on a plasticizing lithium salt

AB The results of an exploratory study of the behavior of electrolytes based on a novel polymer host with the plasticizing salt, lithium bis(trifluoromethanesulfonyl) imide (LiTFSI), and low molar mass additives, are described in this presentation. A range of electrolytes with lithium salt compns. between n = 3 and 85 (n represents the molar ratio of polymer units per lithium ion) were prepared Plasticized electrolytes in which the salt content was maintained constant at n = 10 and the additive composition were varied between 5 and 15% was also produced. In both these series of electrolytes homogeneous solns. were prepared by co-dissoln. of salt and polymer in an anhydrous solvent with a controlled amount of additive. These solns. were cast and evaporated within a preparative dry-box, under a dry argon atmospheric, to form thin films of electrolyte which were characterized by measurements of total ionic conductivity, DSC and TG.

The LiTFSI-based electrolytes showed encouraging levels of ionic conductivity and acceptable thermal stability. Electrolytes based on this host polymer were obtained as very transparent, completely amorphous films with excellent mech. properties.

ST poly cyclotrimethylene polymer carbonate battery electrolyte plasticizer lithium salt; glass transition decompn polymer electrolyte LiTFSI blend ionic cond

IT Films
(amorphous; characterization of novel polymer electrolyte based on plasticizing carbonate and lithium salt)

IT Battery electrolytes
Ionic conductivity
Polymer electrolytes
(characterization of novel polymer electrolyte based on plasticizing carbonate and lithium salt)

IT Secondary batteries

(lithium; characterization of novel polymer electrolyte based on plasticizing carbonate and lithium salt)
IT Thermal decomposition
(of poly(TMC) and blends with LiTFSI salts; characterization decomposition temperature of novel polymer electrolyte based on plasticizing carbonate and lithium salt)
IT Glass transition temperature
(of poly(TMC) and blends with LiTFSI salts; characterization of novel polymer electrolyte based on plasticizing carbonate and lithium salt)
IT 108-32-7, Propylene carbonate
RL: DEV (Device component use); USES (Uses)
(PC, plasticizer; characterization of novel polymer electrolyte based on plasticizing carbonate and lithium salt)
IT 2453-03-4, Trimethylene carbonate
RL: DEV (Device component use); USES (Uses)
(TMC, plasticizer; characterization of novel polymer electrolyte based on plasticizing carbonate and lithium salt)
IT 31852-84-3P, Poly(trimethylene carbonate)
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(d.p. ~ 2915, TMC- of PC- plasticized polymer electrolyte doped with LiTFSI; characterization of novel polymer electrolyte based on plasticizing carbonate and lithium salt)
IT 90076-65-6, LiTFSI
RL: DEV (Device component use); USES (Uses)
(polymer electrolyte doped with; characterization of novel polymer electrolyte based on plasticizing carbonate and lithium salt)

L3 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:675776 CAPLUS
DOCUMENT NUMBER: 139:216907
TITLE: Electrolyte and secondary lithium battery using the electrolyte
INVENTOR(S): Okumura, Takefumi; Nishimura, Noboru; Akatsuka, Masaki
PATENT ASSIGNEE(S): Hitachi Ltd., Japan; Hitachi Maxell Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003243035	A2	20030829	JP 2002-41161	20020219
PRIORITY APPLN. INFO.:			JP 2002-41161	20020219

TI Electrolyte and secondary lithium battery using the electrolyte
AB The electrolyte contains a copolymer of a carbonate compound I (R1 .apprx. R8 = H or C<4 aliphatic hydrocarbon group) and an electrolyte salt. The battery has a cathode reversibly intercalating and decalating Li, an anode, and a Li containing electrolyte solution comprising the above electrolyte.
ST secondary lithium battery electrolyte carbonate compd copolymer
IT Battery electrolytes
(electrolyte solns. containing copolymers of carbonate compds. for secondary lithium batteries)
IT Secondary batteries
(lithium; electrolyte solns. containing copolymers of carbonate compds. for secondary lithium batteries)

IT 96-49-1, Ethylene carbonate 623-53-0, Ethyl methyl carbonate 21324-40-3, Lithium hexafluorophosphate 29035-08-3 31852-84-3, Trimethylene carbonate homopolymer 90076-65-6 155449-11-9
RL: TEM (Technical or engineered material use); USES (Uses)
(electrolyte solns. containing copolymers of carbonate compds. for secondary lithium batteries)

L3 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:869458 CAPLUS
DOCUMENT NUMBER: 137:372553
TITLE: Novel polycarbonate polymers and oligomers for use as electrolytes in electrochemical devices
INVENTOR(S): Smith, W. Novis; McCloskey, Joel
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 6 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002168575	A1	20021114	US 2001-849117	20010505
US 6602976	B2	20030805		
PRIORITY APPLN. INFO.:			US 2001-849117	20010505

ST polycarbonate polymer oligomer electrolyte electrochem device; battery polycarbonate polymer oligomer electrolyte; capacitor polycarbonate polymer oligomer electrolyte; sensor polycarbonate polymer oligomer electrolyte
IT Battery electrolytes
Capacitors
Condensation reaction
Electrochemical cells
Sensors
(polycarbonate polymers and oligomers for use as electrolytes in electrochem. devices)
IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 504-63-2, 1,3-Propanediol 2453-03-4, Trimethylene carbonate 7791-03-9, Lithium perchlorate
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(polycarbonate polymers and oligomers for use as electrolytes in electrochem. devices)

L3 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:677093 CAPLUS
DOCUMENT NUMBER: 138:41906
TITLE: Study of novel lithium salt-based, plasticized polymer electrolytes
AUTHOR(S): Silva, Maria Manuela; Barros, Sandra Cerqueira; Smith, Michael J.; MacCallum, James R.
CORPORATE SOURCE: IBQF, Universidade do Minho, Braga, 4710-057, Port.
SOURCE: Journal of Power Sources (2002), 111(1), 52-57
CODEN: JPSODZ; ISSN: 0378-7753
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB The results of a preliminary investigation of a series of polymer electrolytes based on a novel polymer host, poly(trimethylene carbonate) (p(TMC)), with lithium triflate or lithium perchlorate and various

plasticizing additives, are described in this presentation. Electrolytes with lithium salt compns. of about n=10 (where n represents the molar ratio of (O:COCH2CH2CH2O) units per lithium ion) and additive compns. between 5 and 15 weight% (with respect to p(TMC)), were prepared by co-dissoln. of salt and polymer in anhydrous solvent with a controlled amount of additive. The homogeneous solns. obtained were evaporated within a preparative glove box and under a dry argon atmospheric to form thin films of electrolyte. The solvent-free electrolyte films produced were characterized by measurements of total ionic conductivity, differential scanning calorimetry and thermogravimetry. In general the triflate-based electrolytes show moderate ionic conductivity and good thermal stability while perchlorate-based electrolytes showed higher levels of conductivity but lower thermal stability. Electrolytes based on this host polymer, with both lithium salts, were obtained as very flexible, transparent, completely amorphous films.

ST battery electrolytes lithium salt plasticized polymer

IT Battery electrolytes
(lithium salt-based, plasticized polymer electrolytes)

IT 7791-03-9, Lithium perchlorate 31852-84-3, Poly(trimethylene carbonate) 33454-82-9, Lithium triflate
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(lithium salt-based, plasticized polymer electrolytes)

L3 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:66770 CAPLUS
DOCUMENT NUMBER: 136:121064
TITLE: Nonaqueous electrolyte lithium secondary battery
INVENTOR(S): Iwamoto, Kazuyu; Oura, Takafumi; Hatazaki, Makino; Yoshizawa, Hiroshi; Sonoda, Kumiko; Nakanishi, Shinji
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 31 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1174940	A1	20020123	EP 2001-117048	20010712
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002033119	A2	20020131	JP 2000-215518	20000717
JP 2002033120	A2	20020131	JP 2000-215519	20000717
JP 2002033124	A2	20020131	JP 2000-215520	20000717
US 2002039677	A1	20020404	US 2001-901130	20010710
US 6958198	B2	20051025		
CN 1333580	A	20020130	CN 2001-123135	20010717

PRIORITY APPLN. INFO.: JP 2000-215518 A 20000717
JP 2000-215519 A 20000717
JP 2000-215520 A 20000717
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Nonaqueous electrolyte lithium secondary battery

AB The invention relates to a nonaq. electrochem. apparatus in which the difference (γl-γse) between the surface tension γl of nonaq. electrolyte and the surface free energy γse of electrode is not more than 10 dynes/cm. The nonaq. electrolyte contains a F-containing surface active agent.

ST nonaq electrolyte lithium secondary battery

IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)

(C2-20, fluoroalkyl; nonaq. electrolyte lithium secondary battery)

IT Sulfonic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(alkanesulfonic, sodium salts, fluoro-; nonaq. electrolyte lithium secondary battery)

IT Anhydrides
Ethers, uses
RL: MOA (Modifier or additive use); USES (Uses)
(cyclic; nonaq. electrolyte lithium secondary battery)

IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(esters, cyclic; nonaq. electrolyte lithium secondary battery)

IT Secondary batteries
(lithium; nonaq. electrolyte lithium secondary battery)

IT Battery electrodes
Battery electrolytes
Surface free energy
Surface tension
Surfactants
(nonaq. electrolyte lithium secondary battery)

IT Carbonaceous materials (technological products)
RL: DEV (Device component use); USES (Uses)
(nonaq. electrolyte lithium secondary battery)

IT Cyclic compounds
RL: MOA (Modifier or additive use); USES (Uses)
(nonaq. electrolyte lithium secondary battery)

IT Lactones
RL: MOA (Modifier or additive use); USES (Uses)
(nonaq. electrolyte lithium secondary battery)

IT Fluoropolymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(nonaq. electrolyte lithium secondary battery)

IT 463-79-6D, Carbonic acid, esters 1343-98-2D, Silicic acid, esters 7664-38-2D, Phosphoric acid, esters 7664-93-9D, Sulfuric acid, esters 7697-37-2D, Nitric acid, esters 7782-77-6D, Nitrous acid, esters 7782-99-2D, Sulfurous acid, esters 10043-35-3D, Boric acid, esters 13598-36-2D, Phosphorous acid, esters
RL: MOA (Modifier or additive use); USES (Uses)
(cyclic; nonaq. electrolyte lithium secondary battery)

IT 79-20-9, Methyl acetate 85-44-9, Phthalic anhydride 96-48-0, γ-Butyrolactone 96-49-1, Ethylene carbonate 105-54-4, Ethyl butyrate 105-58-8, Diethyl carbonate 108-29-2, γ-Valerolactone 108-30-5, Succinic anhydride, uses 108-32-7, Propylene carbonate 109-60-4, n-Propyl acetate 123-86-4, Butyl acetate 140-11-4, Benzyl acetate 141-78-6, Ethyl acetate, uses 517-23-7, α-Acetyl-γ-butyrolactone 540-42-1, Isobutyl propionate 554-12-1, Methyl propionate 616-02-4, Citraconic anhydride 616-38-6, Dimethyl carbonate 623-53-0, Ethylmethyl carbonate 1679-47-6, α-Methyl-γ-butyrolactone 2170-03-8, Itaconic anhydride 2453-03-4, 1,3-Dioxan-2-one 7782-42-5, Graphite, uses 9002-88-4, Polyethylene 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 52627-24-4, Cobalt lithium oxide 52876-41-2, Trimethylene borate 90076-65-6 132843-44-8 201416-30-0, 4,5-Diphenyl-1,3,2-dioxathiole-2,2-dioxide 389604-01-7
RL: DEV (Device component use); USES (Uses)
(nonaq. electrolyte lithium secondary battery)

IT 77-79-2, Sulfolene 102-09-0, Diphenyl carbonate 126-33-0, Sulfolane 463-79-6D, Carbonic acid, ester 822-38-8, Ethylene trithiocarbonate

872-36-6, Vinylene carbonate 872-93-5, 3-MethylSulfolane 930-35-8, Vinylene trithiocarbonate 1120-71-4, Propanesultone 1600-44-8 1633-83-6, 1,4-Butanesultone 2171-74-6, 1,3-Benzodioxol-2-one 2965-52-8 3741-38-6, Ethylene sulfite 3967-54-2, Chloroethylene carbonate 4236-15-1 4427-92-3, Phenylethylene carbonate 4427-96-7, Vinylethylene carbonate 6255-58-9 7440-44-0, Carbon, uses 7704-34-9D, Sulfur, ester 16761-08-3 21240-34-6 37228-47-0, Ethylene phosphite 40630-61-3 52550-45-5 75032-95-0, Disodium N-perfluorooctanesulfonylglutamate 75046-16-1 122036-85-5 324547-56-0 366787-88-4
RL: MOA (Modifier or additive use); USES (Uses)
(nonaq. electrolyte lithium secondary battery)

IT 24937-79-9, Pvdf
RL: TEM (Technical or engineered material use); USES (Uses)
(nonaq. electrolyte lithium secondary battery)

L3 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:636149 CAPLUS
DOCUMENT NUMBER: 131:245575
TITLE: Lithium secondary battery and electrolyte exhibiting safe operation termination in electric apparatus
INVENTOR(S): Arai, Juichi; Katayama, Hideaki; Akahoshi, Haruo; Takamura, Tomoe; Iwayanagi, Takao
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan
SOURCE: Eur. Pat. Appl., 27 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 944126	A1	19990922	EP 1999-102880	19990303
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
TW 480756	B	20020321	TW 1999-88102672	19990223
US 6475680	B1	20021105	US 1999-267671	19990315
JP 11329497	A2	19991130	JP 1999-69539	19990316
PRIORITY APPLN. INFO.:			JP 1998-68113 A	19980318

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Lithium secondary battery and electrolyte exhibiting safe operation termination in electric apparatus

AB A lithium secondary battery is described which is capable of terminating the operation of the battery safely, without rapid change in appearance, gas generation, or pressure change when overcharge, overdischarge, or abnormal temperature rise occurs in the battery, the electrolyte, or the elec. apparatus using the battery as a power source. The battery comprises an anode capable of absorbing and desorbing lithium, a cathode capable of absorbing and desorbing lithium, and a non-aqueous electrolyte which is solidified by thermal reaction at a designated temperature. The electrolyte contains a Li salt, a thermally polymerizable non-aqueous solvent, e.g., a cyclic carbonate such as di-Ph carbonate, and an initiator, e.g., I2.

ST lithium secondary battery electrolyte shutoff safety; safety lithium secondary battery shutoff

IT Electric appliances
(domestic; portable; lithium secondary battery and electrolyte exhibiting safe operation termination in elec. apparatus)

IT Battery electrolytes

Electric vehicles
Safety
(lithium secondary battery and electrolyte exhibiting safe operation termination in elec. apparatus)

IT Secondary batteries
(lithium; lithium secondary battery and electrolyte exhibiting safe operation termination in elec. apparatus)

IT Computers
(microcomputers, laptop; notebook; lithium secondary battery and electrolyte exhibiting safe operation termination in elec. apparatus)

IT Telephones
(mobile; lithium secondary battery and electrolyte exhibiting safe operation termination in elec. apparatus)

IT Machinery
(vending machines; lithium secondary battery and electrolyte exhibiting safe operation termination in elec. apparatus)

IT 7440-44-0, Carbon, uses 7782-42-5, Graphite, uses
RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)
(anode; lithium secondary battery and electrolyte exhibiting safe operation termination in elec. apparatus)

IT 12057-17-9, Lithium manganese oxide (LiMn2O4) 12190-79-3, Lithium cobaltate (LiCoO2)
RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)
(cathodes; lithium secondary battery and electrolyte exhibiting safe operation termination in elec. apparatus)

IT 74-88-4, uses 78-67-1, Azobisisobutyronitrile 108-86-1, Bromobenzene, uses 115-86-6, Triphenyl phosphate 311-28-4, Tetrabutylammonium iodide 2094-98-6, 1,1'-Azobis(cyclohexane-1-carbonitrile) 7439-93-2D, Lithium, compds., uses 7447-41-8, Lithium chloride, uses 7550-35-8, Lithium bromide 7553-56-2, Iodine, uses 7789-24-4, Lithium fluoride, uses 10377-51-2, Lithium iodide 25776-12-9 68140-33-0 104222-30-2, 2,2'-Azobis(2-methyl-N-(1,1-bis(hydroxymethyl)ethyl))propionamide
RL: CAT (Catalyst use); DEV (Device component use); NUU (Other use, unclassified); USES (Uses)
(electrolytes containing; lithium secondary battery and electrolyte exhibiting safe operation termination in elec. apparatus)

IT 96-49-1, Ethylene carbonate 102-09-0 105-58-8, Diethylcarbonate 108-32-7, Propylene carbonate 616-38-6, Dimethylcarbonate 623-53-0, Ethylmethyl carbonate 2453-03-4, 1,3-Propylene carbonate 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 27665-39-0, 1,4-Butanedisulfonic acid
RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)
(electrolytes containing; lithium secondary battery and electrolyte exhibiting safe operation termination in elec. apparatus)

L3 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1987:443136 CAPLUS
DOCUMENT NUMBER: 107:43136
TITLE: Secondary nonaqueous batteries
INVENTOR(S): Yoshino, Akira; Sanechika, Kenichi
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 61285662	A2	19861216	JP 1985-126144	19850612

PRIORITY APPLN. INFO.: JP 1985-126144 19850612

AB Conductive polymer anodes of nonaq. batteries are covered with reaction products of the n-doped polymer and cyclic carbonate ester I (Z = C2-5 linear alkylene, that may be substituted by halo, alkyl or aryl, or II. Thus, 13 mg polyacetylene was doped with Li+ in a cell using a Li counterelectrode and 0.6M LiClO4 in propylene carbonate electrolyte at 5 mA for 2.3 h, discharged at 5 mA to an electrode potential of 2.5 V vs. a Li reference electrode, washed with propylene carbonate and benzene, and dried to obtain a coated polyacetylene anode. A laminar battery using this anode, a LiCoO2 cathode, and 0.6M LiBF4 in 1:1 (weight) ethylene carbonate-C6H6 electrolyte showed only a small capacity decrease after >300 charging-discharging cycles.

ST battery polymer anode surface layer; polyacetylene anode propylene carbonate treatment; cyclic ester polymer anode treatment

IT Anodes
(battery, polymer, treated with cyclic carbonate esters)

IT 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate 2453-03-4
RL: USES (Uses)
(in treatment of anodes of conductive polymer, for batteries)

L3 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1986:98018 CAPLUS
DOCUMENT NUMBER: 104:98018
TITLE: Preparation and utilization of polyacetylene composites
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60125665	A2	19850704	JP 1983-233648	19831213
JP 05034781	B4	19930524		
US 4634636	A	19870106	US 1984-679399	19841207
EP 149133	A2	19850724	EP 1984-115174	19841211
EP 149133	A3	19880330		
EP 149133	B1	19900829		
R: BE, CH, DE, FR, GB, LI				
US 4686160	A	19870811	US 1986-896633	19860815
US 4748047	A	19880531	US 1987-39728	19870420

PRIORITY APPLN. INFO.:

JP 1983-233648	A	19831213
JP 1983-233649	A	19831213
US 1984-679399	A3	19841207
US 1986-896633	A3	19860815

AB Polyacetylene composites are obtained by coating polyacetylene with an ortho ester derivative I [M = alkali metal; X, X1 = C2-5 straight-chain alkylene, halo-, alkyl-, aryl-substituted alkylene or polymethylene-bridged alkylene]. The composite is obtained by electroreducing II [X2 = C2-5 straight chain alkylene; halo-, alkyl-, aryl-substituted alkylene, or polymethylene (n = 3-5)-bridged alkylene] in an alkali metal ion-containing electrolyte using a polyacetylene electrode. The composite is useful as the anode-active material of a secondary battery.

ST ortho ester deriv polyacetylene composite; battery secondary anode polyacetylene composite; carbonate cyclic ester electrolysis polyacetylene

IT 25067-58-7

RL: PRP (Properties)
(composite with ortho ester derivs., formed by electroredn., of cyclic carbonate in presence of alkali metal ion-containing electrolyte)
IT 96-49-1 108-32-7 463-79-6D, cyclic esters 2453-03-4
RL: PROC (Process)
(electroredn. of, in presence of alkali metal ion-containing electrolyte for polyacetylene composite for battery anode)
IT 7791-03-9
RL: PRP (Properties)
(in electrochem. preparation of ortho ester derivs. for forming polyacetylene composites for secondary battery anodes)
IT 100501-81-3P 100501-82-4P 100501-83-5P
RL: PREP (Preparation)
(preparation of, electrochem., for composites with polyacetylene, for battery anode)

L3 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1985:425004 CAPLUS
DOCUMENT NUMBER: 103:25004
TITLE: Nonaqueous battery
PATENT ASSIGNEE(S): Sanyo Electric Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60041775	A2	19850305	JP 1983-151114	19830818
JP 05003113	B4	19930114		

PRIORITY APPLN. INFO.: JP 1983-151114 19830818
TI Nonaqueous battery
AB A nonaq. battery having a light metal anode uses as electrolyte solvent 1,3-dioxacyclohexane-2-one DC [2453-03-4] or its mixture with other solvents. A mixture with MeOCH2CH2OMe [110-71-4] may be conveniently used. The battery has extended storage life. Thus, a battery having a Li anode, a MnO2-acetylene black-PTFE cathode, and a M LiClO4 in 1:1 DC-MeOCH2CH2OMe electrolyte showed after storage at 60° for 3 mo a better discharge performance than a control battery using propylene carbonate electrolyte solvent.
ST battery electrolyte solvent dioxacyclohexanone; dimethoxyethane battery electrolyte solvent; lithium battery electrolyte solvent
IT Batteries, primary
(lithium-manganese dioxide, with electrolyte containing 1,3-dioxacyclohexane-2-one)
IT 110-71-4
RL: USES (Uses)
(battery electrolyte solvent containing 1,3-dioxacyclohexane-2-one and, lithium-manganese dioxide)
IT 2453-03-4
RL: USES (Uses)
(battery electrolyte solvent containing, lithium-manganese dioxide)

L3 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1973:78852 CAPLUS
DOCUMENT NUMBER: 78:78852
TITLE: Lithium-nickel sulfide batteries

AUTHOR(S): Gaines, Lewis; Jasinski, Raymond
CORPORATE SOURCE: Tyco Lab. Inc., Waltham, MA, USA
SOURCE: U. S. Nat. Tech. Inform. Serv., AD Rep. (1972), No. 749861, 53 pp. Avail.: NTIS
From: Govt. Rep. Announce. (U.S.) 1972, 72(23), 97
CODEN: XADRCH
DOCUMENT TYPE: Report
LANGUAGE: English
AB The work described represents a development program designed to improve the performance of the Li-Ni sulfide battery system at high rates and (or) at low temps. Investigation of the high rate discharge performance of Ni3S2 indicated that rate capability was strongly influenced by the viscosity of the cell electrolyte. Stable discharges at ≤6 mA/cm2 were obtained from Teflon-bonded electrodes in a THF/LiClO4 electrolyte. Study of the Ni3S2 oxidation procedure indicated that the optimum temperature for the production of the high voltage material was 325°. X-ray diffraction anal. of the oxidized Ni3S2 indicated the presence of the relatively S rich Ni sulfides: Ni7S6 and NiS. These materials possess higher theor. energy ds. than Ni3S2. A brief study of the discharge properties of metallic oxides, carbonates, and cyanides in propylene carbonate/LiClO4 electrolyte indicated that although several of these materials exhibited acceptable discharge and voltage efficiencies, none were of sufficient interest to justify further development.
ST lithium nickel sulfide battery; THF lithium perchlorate battery
IT 12503-53-6P 16812-54-7P
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in oxidized battery electrodes, energy d. in relation to)
IT 109-99-9, uses and miscellaneous 2453-03-4
RL: USES (Uses)
(in lithium-nickel sulfide batteries)
IT 12035-72-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, in battery electrodes, energy d. in relation to